

WHAT IS CLAIMED IS:

1. A method for preventing or inhibiting neuronal degeneration, or for promoting nerve regeneration, in the central nervous system (CNS) or peripheral nervous system (PNS), or for protecting CNS cells from glutamate toxicity, which comprises administering to an individual in need thereof an effective amount of an agent selected from the group consisting of (a) poly-Glu,Tyr and (b) T cells which have been activated by poly-Glu,Tyr.

2. A method in accordance with claim 1 for protecting CNS cells from glutamate toxicity, wherein the individual in need thereof is being treated post-operatively after tumor removal from or surgery on the CNS to protect CNS cells from glutamate toxicity.

3. A method in accordance with claim 1 for treating injury or disease caused or exacerbated by glutamate toxicity, which comprises administering to an individual having an injury or disease caused or exacerbated by glutamate toxicity an effective amount of an agent selected from the group consisting of (a) poly-Glu,Tyr and (b) T cells which have been activated by poly-Glu,Tyr.

4. A method in accordance with claim 1 for treating neuronal degeneration caused by injury or disease, which comprises administering to an individual having neuronal degeneration caused by injury or disease an effective amount of an agent selected from the group consisting of (a) poly-Glu,Tyr and (b) T cells which have been activated by poly-Glu,Tyr.

5. A method in accordance with claim 1 in which said injury or disease comprises spinal cord injury, blunt trauma, penetrating trauma, hemorrhagic stroke, or ischemic stroke.

6. A method in accordance with claim 1 in which said injury or disease is diabetic neuropathy, senile dementia, Alzheimer's disease, Parkinson's Disease, facial nerve (Bell's) palsy, glaucoma, Huntington's chorea, amyotrophic lateral sclerosis, status epilepticus, non-arteritic optic neuropathy, or vitamin deficiency.

7. A method in accordance with claim 2 or 3, in which said injury or disease is epilepsy, amnesia, anxiety, hyperalgesia, psychosis, seizures, oxidative stress, or opiate tolerance and dependence.

8. A method in accordance with claim 2 or 3, in which said injury or disease is associated with abnormally elevated intraocular pressure.

9. A method in accordance with claim 1, in which said injury or disease is an autoimmune disease.

10. A method in accordance with claim 1, wherein said administering step comprises administering to said individual an effective amount of activated T cells which have been activated by poly-Glu,Tyr.

11. A method in accordance with claim 10, wherein said poly-Glu,Tyr-specific activated T cells are autologous T cells, or allogeneic T cells from related donors, or HLA-matched or partially matched, semi-allogeneic or fully allogeneic donors.

12. A method in accordance with claim 11, wherein said T cells are autologous T cells which have been stored or are derived from autologous CNS cells.

13. A method in accordance with claim 11, wherein said T cells are semi-allogeneic T cells.

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